US Census Bureau Geographic Entities and Concepts

Geography Division



Geographic Concepts

- Addresses vs. Geographic features and entities
- Legal/Administrative vs. Statistical
- Nesting relationships (or the lack of)
- Small area geography (tracts, block groups, blocks)
- Dangers of definitions (boundaries vs. perceptions)
- Calculated geography (ZCTAs, UAs)
- Products and Resources find more information



Geographic Entities

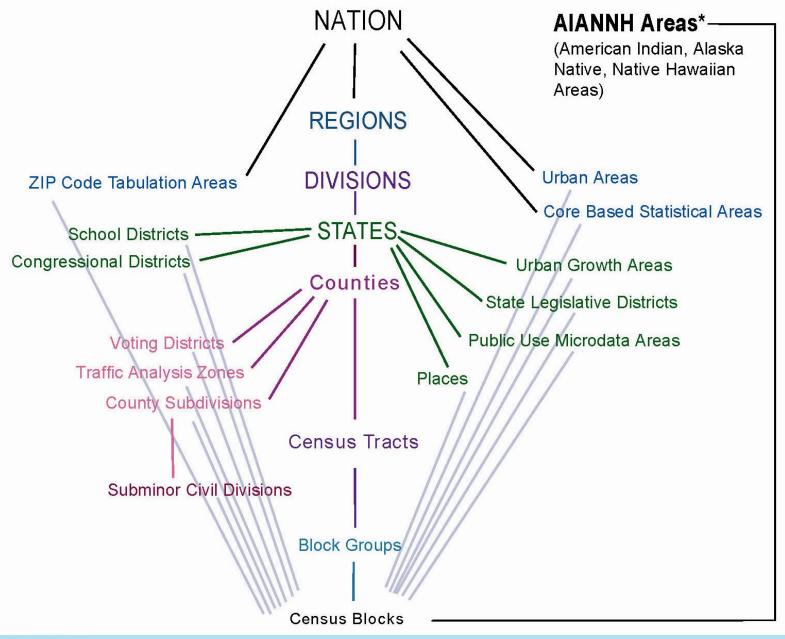
Legal/Administrative

- States
- Counties
- Minor civil divisions
- Congressional districts
- School districts
- Incorporated places

Statistical

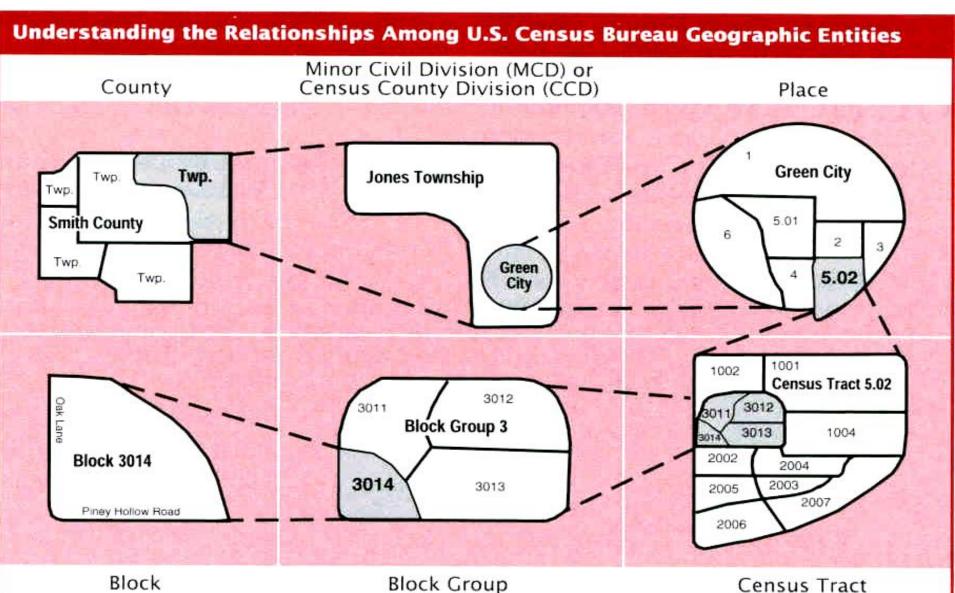
- Census tracts
- Metropolitan/Micropolitan
 statistical areas
- Urban areas
- Census designated places





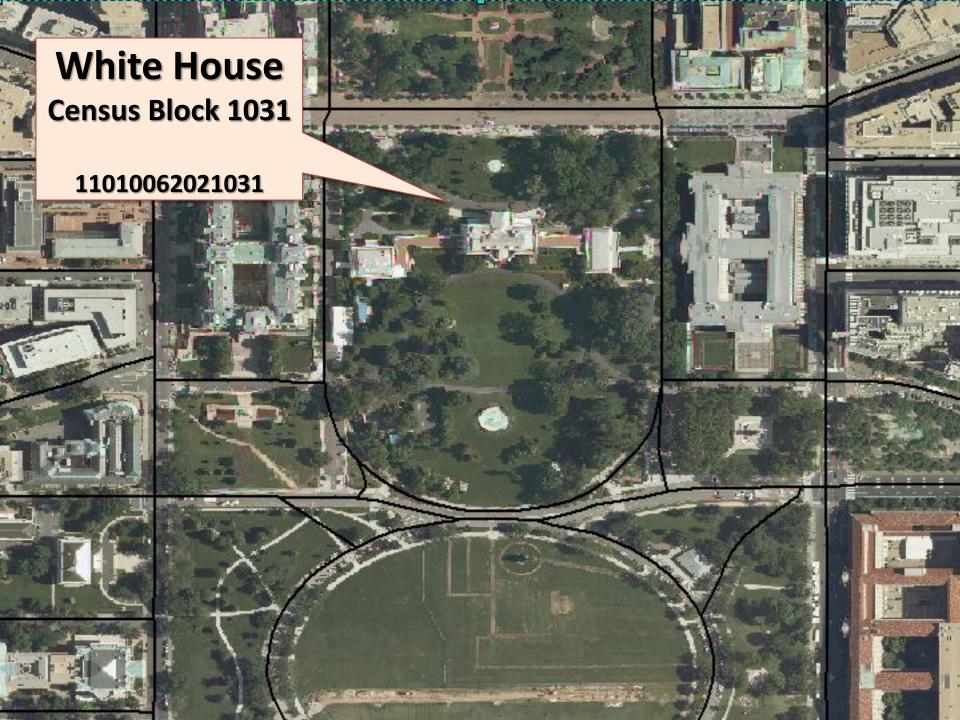


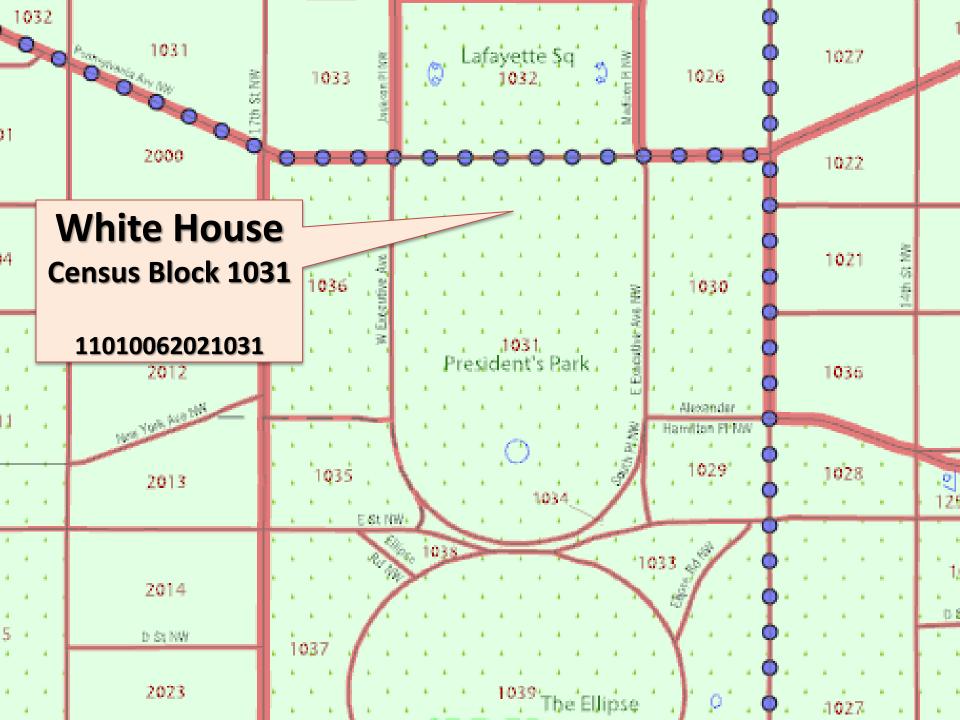
Census Small-Area Geography











2010 Census Redistricting Data (Public Law 94-171)	
	Block 1031, Block Group 1,
	Census Tract 62.02
Total:	5
Population of one race:	5
White alone	0
Black or African	5
American alone	
American Indian and	0
Alaska Native alone	
Asian alone	0
Native Hawaiian and	0
Other Pacific Islander alone	
Some Other Race alone	0



Small Geographic Areas

Census Tracts

- Small, permanent, consistent statistical divisions of a county
- Optimally contains 4,000 people; range between 1,200 and 8,000

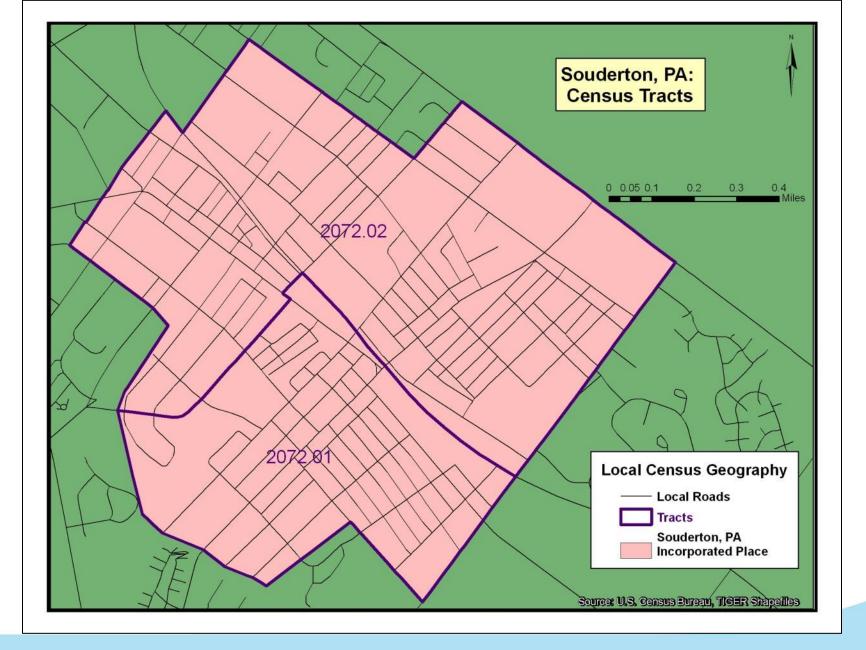
Block Groups

- Smallest units for tabulation of sample data
- Population ranges from 600 to 3,000

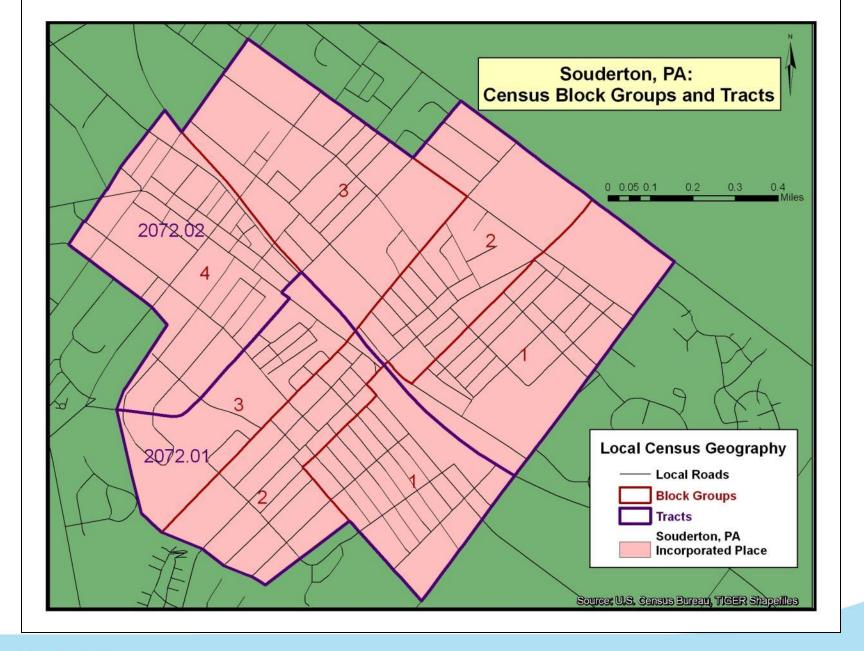
Blocks

- Smallest units for 100% data tabulation
- Cover entire nation
- Nest within all other types of geographic areas
- Generally bounded by visible features or boundaries

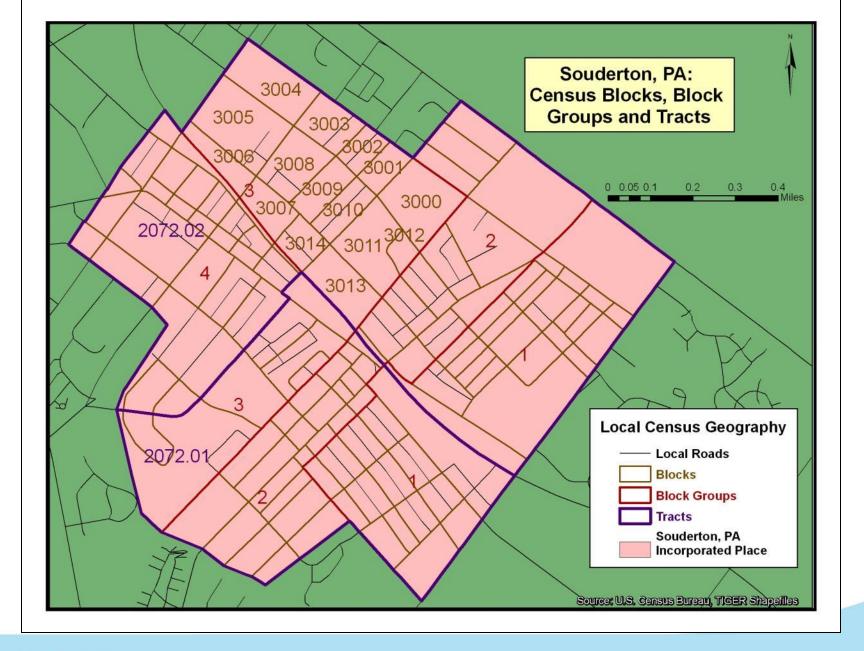
















People

Business

Geography

Data

Newsroom

Q Search

657,000

Housing starts

\$-47.8 B

Economic Indicators

uction

12

12

V12

2010 Census Brief

On January 25, the U.S. Census Bureau will release a 2010 Census brief on the AIAN population at a forum held with the National Museum of the American Indian.

See More

Topologically Integrated Geographic Encoding and Referencing System (TIGER®) Geographic Support System (GSS) Initiative Resources for Understanding Census Geography

Geographic Programs

Maps and Mapping Resources

Census 2000 Geographic Products

2010 Census Geographic Products

Census Tract Resources

LandView® 6

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6

I NOTICE AMENIOA FORUM

American Indian and Alaska Native Populations

Advance Monthly Retail Sales December 2011 Report

Released 8:30 AM EST, 1/12/12

\$400.6 B

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We changed our homepage

\$1,550.1 B

statistically significant

10.4%

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Go

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Quick, easy access to facts about people, business, and geography.

To begin, select a state from this list or

QuickFacts

use the map.

Census News

Facts for Features: Irish-American Heritage Month (March) and St. Patrick's Day (March 17): 2012

Tuesday, January 24, 2012

Irish-American Heritage Month (March) and St. Patrick's Day (March 17): 2012 Originally a religious holiday to honor St. ... Read More

Facts for Features: Super Bowl XLVI

Tuesday, January 24, 2012

Super Bowl XLVI Super Bowl XLVI will be played Feb. 5 at Lucas Oil

Tell us what you think

Stat of the Day

American Indian And Alaska Natives

As of the 2010 Census, the nation's population of American Indians and Alaska Natives was 5.2 million,





Select a state to begin 🔻

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Select a state to begin 🔻

Interactive Map



Resources for Understanding Census Bureau Geography

Hierarchical Diagrams of Census Bureau Geography

- American Indian Area/Alaska Native Area/Hawaiian Home Lands diagram [PDF]
- Census Bureau Legal and Statistical Geographic Entities [PDF]

Census Regions and Divisions of the United States

[PDF] or [Text]

Geographic Glossaries and Guides

- Geographic Terms and Concepts
 - 2010 [PDF] [HTML]
 - 2008 [PDF] [TXT]
 - 2000 [PDF] [HTML]
- Guide to State and Local Census Geography
- 2007 Economic Census Geography Definitions
- Geographic Changes for Census 2000 + Glossary
- Geographic Areas Reference Manual (GARM) (1990 Census).



http://www.census.gov/geo/www/reference.html

Geography Related Census Blog Postings

- Mapping the 2010 Census
- U.S. Census Bureau Releases 2010 Guide to State and Local Census Geography
- What Are Census Blocks?
- Why Geography Is Important

Geographic Area Criteria, Geographic Codes and Census Tract Resources

- Urban and Rural Classification
 - 2010, 2000 and 1990 Census Federal Register Notices; Urban Area Files; Urban Cluster Files; Major Airports
- County Adjacency File
- 2008 County Subdivision and Place Information
- Census Tract Locating Resources
- American National Standards Institute (ANSI) Codes (formerly FIPS)
- Metropolitan and Micropolitan Statistical Areas
- ZCTAs™ (ZIP Code[®] Tabulation Areas)
 - Area representations of USPS ZIP Code service areas.
- U.S. Postal Service ZIP Code data
 - Information on the Census Bureau's position regarding ZIP Code data



Geographic Terms and Concepts References and Resources

Geographic Glossaries and Guides

- Geographic Terms and Concepts
 - 2010 [PDF] [HTML]
 - 2008 [PDF] [TXT]
 - 2000 [PDF] [HTML]
- Guide to State and Local Census Geography
- 2007 Economic Census Geography Definitions
- Geographic Changes for Census 2000 + Glossary
- Geographic Areas Reference Manual (GARM) (1990 Census)
- Guide to Online Cartographic and Geographic Resources [PDF].
- Substantial County Changes 1970-Present
- Geographic Boundary Change Notes 2000 Present



2010 Census Geographic Terms and Concepts

This site provides definitions of geographic terms and concepts as well as a description of the different methods used to present information for geographic entities in U.S. Census Bureau data products. The site contains definitions for all geographic area terms and concepts recognized by the Census Bureau and that may appear in any Census Bureau product presenting demographic and housing data (geographic terms and concepts unique to the economic census and other specialized surveys and censuses are not included in this document).

The inclusion of a particular term or concept on this site does not imply that data for that geographic entity or attribute appear in each data product. For instance, data for tribal census tracts and tribal block groups will appear only in products providing data according to the American Indian Nation-based geographic hierarchy (see the American Indian Area/Alaska Native
Area/Hawaiian Home Lands Hierarchy Diagram [PDF]). As another example, because urban areas are defined on the basis of decennial census population counts, data for urban areas do not appear in initial decennial census data products. In addition, the description of both the hierarchical and inventory approaches to presenting data for geographic entities does not imply that both formats are used in each data product.

The information contained in this site is also available in a printer-friendly PDF version.

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Α

- Alaska Native Regional Corporation (ANRC) (see <u>American Indian, Alaska Native, Native</u> Hawaiian Area)
- Alaska Native Village (ANV) (see American Indian, Alaska Native, Native Hawaiian Area)



Geographic Areas Reference Manual

The Geographic Areas Reference Manual describes in great detail the basic geographic entities the Census Bureau uses in its various data tabulations and documents the purposes, definitions, standards, criteria, and procedures used to select, define, delineate, and revise these geographic entities.

Since the publication of the GARM in November 1994, there have been two major changes in geographic areas for Census 2000:

- The Census Bureau will no longer include the Republic of Palau in U. S. censuses because it is an independent state.
- All entities referred to as "block numbering areas" (BNAs) in 1990 will become census tracts.

If you have any questions about this or any other information on changes in geographic areas for Census 2000, please contact the Geographic Standards and Criteria Branch, Geography Division, U.S. Census Bureau, Washington, DC 20233-7400, telephone (301) 763-3056.

[PDF] or denotes a file in Adobe's <u>Portable Document Format</u>. To view the file, you will need the <u>Adobe® Reader®</u>. The available **free** from Adobe.

View or Download the Geographic Areas Reference Manual files: 🔼

- Table of Contents (500K)
- Chapter 1 Census Bureau Geography (473K)
- Chapter 2 Geographic Overview (623K)
- Chapter 3 Local Census Statistical Areas Committees and Other Local Assistance (406K)
- Chapter 4 States, Counties, and Statistically Equivalent Entities (2M)
- Chapter 5 American Indian and Alaska Native Areas (515K)
- Chapter 6 Statistical Groupings of States and Counties (2M)
- Chapter 7 Puerto Rico and the Outlying Areas (11M)
- <u>Chapter 8</u> County Subdivisions (1M)



TIGER Products

Topologically Integrated Geographic Encoding and Referencing system

The Census Bureau offers several file types for mapping census geographic data based on data found in our MAF/TIGER database.

TIGER/Line Shapefiles & Files

- Our most comprehensive dataset, including boundaries, roads, address information, water features, and more
- 2011, 2010, 2009, 2008, 2007, 2006, 2000, 1992

Cartographic Boundary Files

- Generalized (limited detail) boundary files designed for thematic mapping
- 2010, 2000, 1990

KMLs

- Boundary files for use with Google Earth, Google Maps, or other similar platforms
- · Generalized and Detailed boundaries
- 2010

Help Me Choose...

TIGERweb

- Interactive and WMS access to our legal and statistical boundaries, roads, water features, and more
- 2010



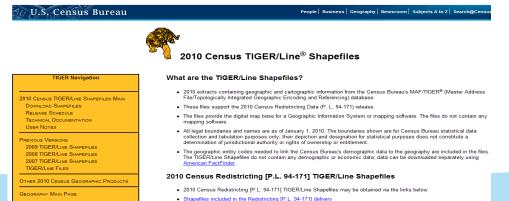
Accessing Shapefiles

Public product created from the MAF/TIGER Data Base (MTDB)

Digital files containing geographic features, attributes, legal and statistical boundaries

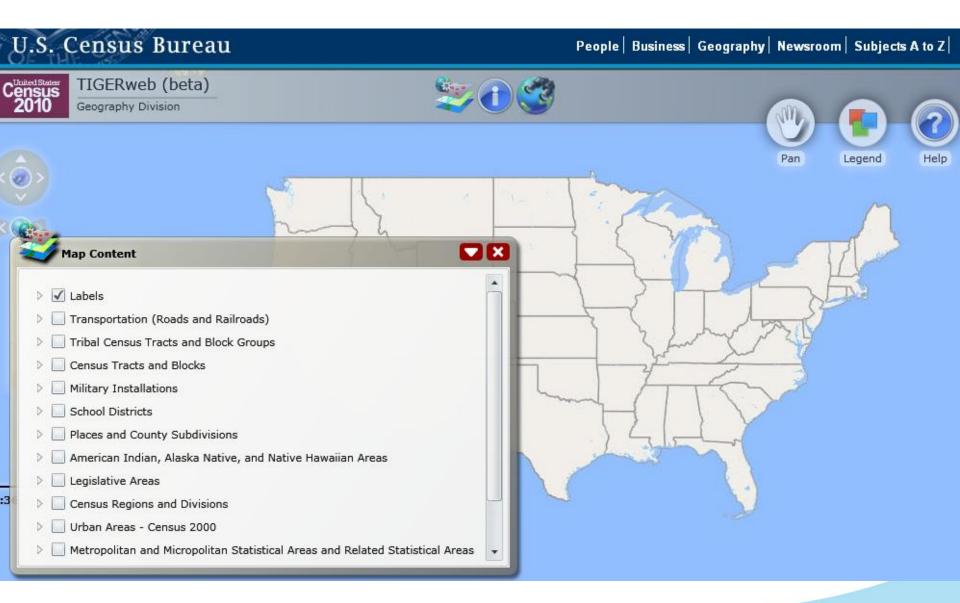
Covers United States, Puerto Rico, and Island Areas Future releases in shapefile format

www.census.gov/geo/www/tiger/index.html

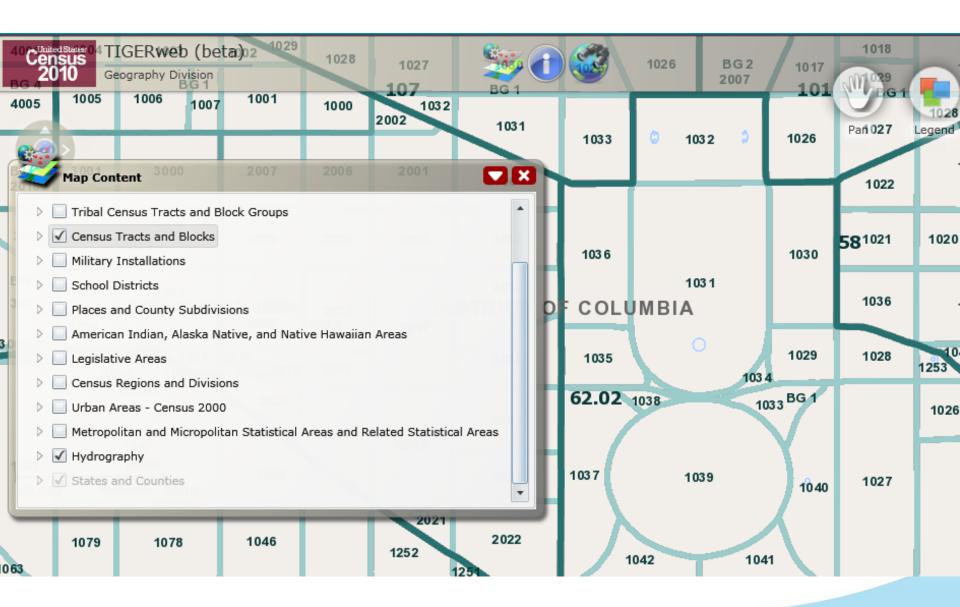


More information about the Redistricting Program











http://tigerweb.geo.census.gov/tigerweb/default.htm

Geographic Programs

2010 Census Local Update of Census Addresses (LUCA)

The Local Update of Census Addresses program, also known as LUCA, is a decennial census geographic partnership program that will allow the Census Bureau to benefit from local knowledge in developing its Master Address File (MAF) for the 2010 Census. Tribal, state, and local governments can contribute to a more complete and accurate census for their community by reviewing and commenting on the list of housing unit and group quarters addresses that the Census Bureau will use to deliver questionnaires within their community.

2010 Census New Construction Program

The 2010 Census New Construction program will help ensure that the U.S. Census Bureau's address list is as complete and accurate as possible by Census Day, April 1, 2010. The Census Bureau is updating its address list by field canvassing all blocks in the spring/summer of 2009. The New Construction program is the opportunity for Tribal and Local governments to submit city style mailing addresses for units constructed after the address canvassing operation. Addresses must have basic construction (closing the structure to the elements) completed by Census Day.

Boundary and Annexation Survey (BAS)

Determining the inventory of legally defined entities and the correct names, legal descriptions and boundaries of counties and equivalent areas, minor civil divisions, incorporated places, American Indian reservations and American Indian off-reservation trust lands

http://www.census.gov/geo/www/programs.html



Geographic Products and Information

Products at a Glance

An overview of 2010 Census geographic and cartographic products, including planned release dates [PDF] [TXT]

Reference Information

- Block Assignment Files
 - Block Assignment Files
 - Name Look-Up Tables
- Geographic Terms and Concepts
- Hierarchy Diagrams
 - American Indian Area/Alaska Native Area/Hawaiian Home Lands [PDF]
 - o Census Bureau Legal and Statistical Geographic Entities [PDF]
- New Incorporations (2000 2010) [Excel] [TXT]
- State Area Measurements and Internal Point Coordinates
- Urban Area Information

Maps

- Reference
 - o 2010 Census Local Census Offices with Type of Enumeration Areas
- Thematic
 - 2010 Census Total Population and Population Change Maps

Relationship Files

Block Relationship Files

Tallies of Geographic Entities

- Gazetteer Files
- · Geographic Tallies by Entity Type
- · Geographic Tallies by State
- Tallies of Census Blocks by State or State Equivalent
- Changes in Number of Census Blocks Between 2000 and 2010 [PDF] [TXT]

TIGER/Line Shapefiles

2010 TIGER/Line Shapefiles



http://www.census.gov/geo/www/

Questions?

Geographic area concepts, criteria, codes, and attributes:

Geographic Standards

and Criteria Branch: 301-763-3056

Geographic products:

Geographic Products Branch: 301-763-1128



Exercise 1

From www.census.gov, navigate to the Geography Page.

Go to 2010 Census Geographic Products.

Identify the link to Geographic Tallies by Entity Type.

Q: How many 2010 Census Tracts are there in Delaware?

Q: How many 2010 Census Tracts are there in Alaska?



Exercise 2

Navigate to Maps→Reference→Census Block maps. Find the block map that contains the White House.

Q: What is the census block number of the block the White House is located in?

Q:Is it the same census block that the US Capitol is located in?



Exercise 3

- Go to the Census homepage (www.census.gov.)
- Click on Subjects A to Z
- Search for more information on Urban Areas (UAs)

Questions:

- 1. How many types of UAs are there?
- 2. Name them and list their population thresholds
- 3. Navigate to the Geography homepage, and then find the same Urban Areas page.



Extra Information

ZCTAs, UAs, Counties, CBSAs, Places



MTDB (MAF/TIGER Database)

Geographic information (roads, rivers, railroads, map spots, map features)

Attributes (names, addresses, codes)

Legal and Statistical Boundaries for data collection, processing and tabulation operations



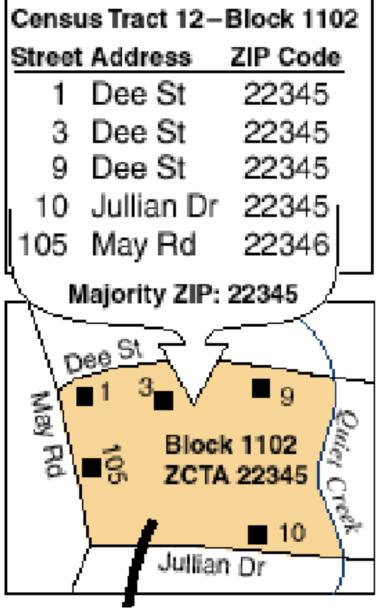
Master Address File (MAF)

Up to date inventory of all known living quarters in the United States (all 50 states) and Puerto Rico

Contains

- The street address, or a comparable location description
- The mailing address, if different from the physical street address
- Census block location of every known living quarters in the United States and related Island Areas
- Geographic codes linking the address to census geography





Creating Zip Code Tabulation Areas (ZCTAs)

- Approximate ZIP Code distribution
- A "calculated" geography
- Composed of whole blocks
- ZCTAs do not nest cleanly within other geography



Urban Area Classification: Census 2010

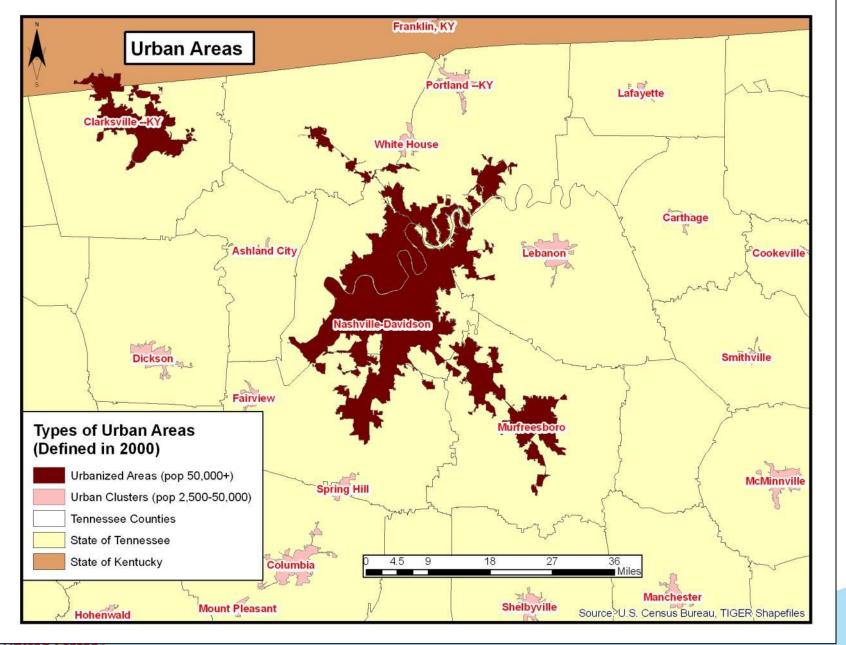
Two types of Urban Areas:

- 1. Urbanized Areas of 50,000 or more people
- 2. Urban Clusters of 2,500 up to 50,000 people

Classification Changes:

- Substantial changes to urban area concept and criteria adopted for Census 2000
- Both defined based on population density at the census block and block group levels
- Area definitions announced in March 2002 with updates in August and November 2002
- Urban areas will be redefined following the 2010 Census



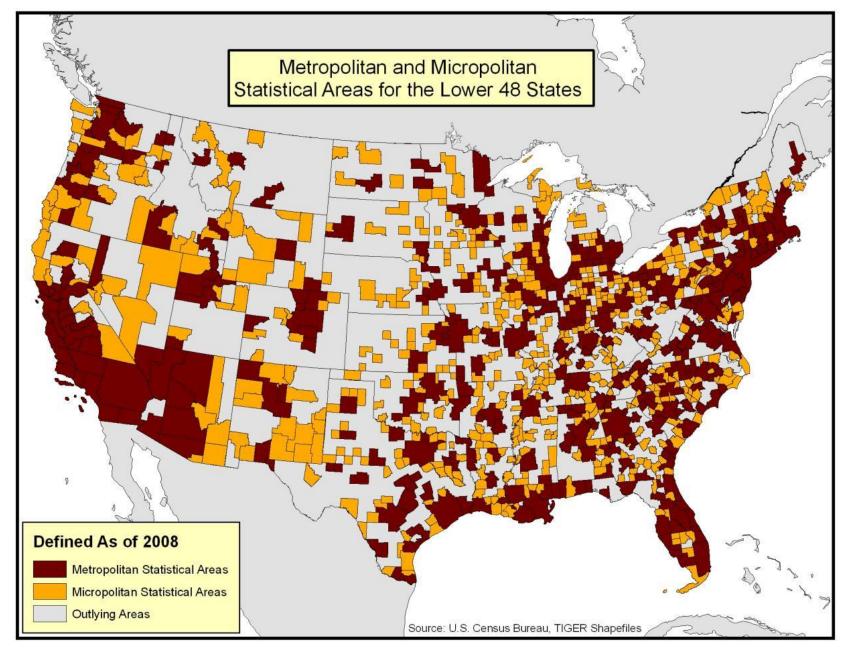




Counties and County Equivalents

- Counties in 48 states
- Independent Cities in MD, MO, NV, and VA
- Parishes in Louisiana
- Cities, Boroughs, Municipality, Census Areas in Alaska
- Municipios in Puerto Rico
- Islands and Districts in American Samoa
- Municipalities in the Northern Marianas
- Islands in the Virgin Islands
- District of Columbia and Guam each treated as a county equivalent







Core Based Statistical Area Classification

- Core Based Statistical Area (CBSA) refers to both metropolitan and micropolitan statistical areas; countybased areas, defined based on commuting patterns
- Metropolitan Statistical Area must have at least one UA
- Micropolitan Statistical Area must have at least one UC with a population of at least 10,000
- <u>Metropolitan Division</u> subdivision of a metropolitan statistical area

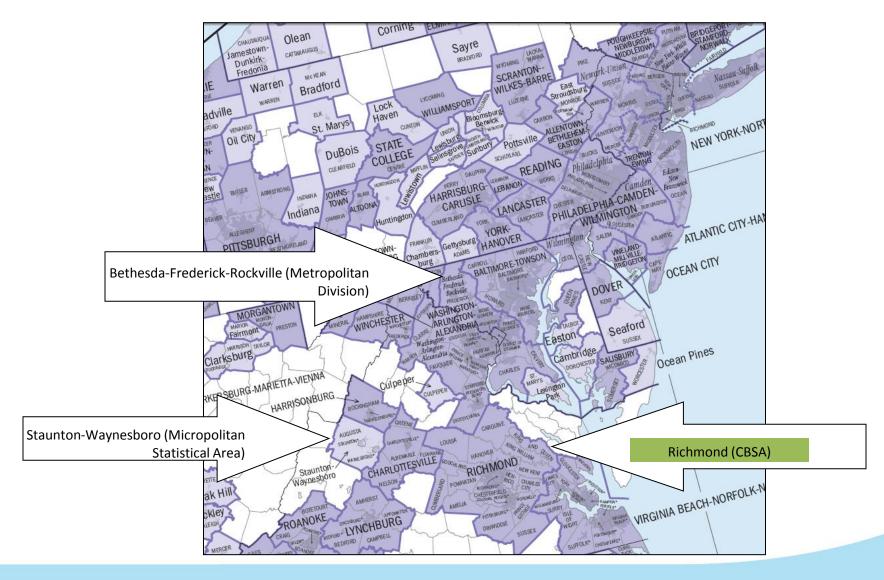


Core Based Statistical Area Classification – continued

- <u>Combined Statistical Area</u> represents a grouping of adjacent CBSAs
- New England City and Town Area a city- and townbased equivalent to the county-based CBSAs
- Principal City a place that occupies a more important social and economic



Core Based Statistical Area Examples





County Subdivisions

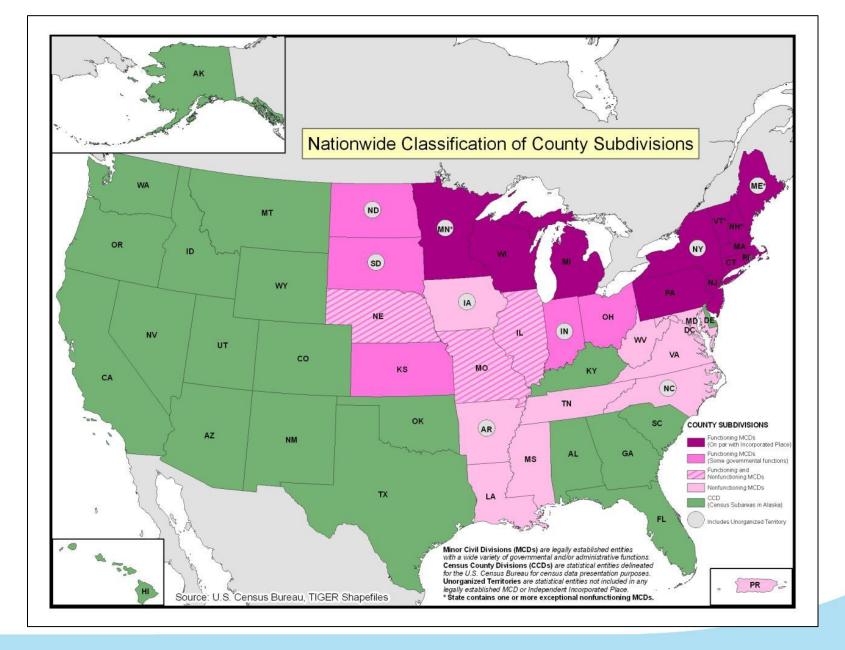
Minor Civil Divisions (MCDs)

- Legally bounded entity
- Subcounty entities in 29 states, the District of Columbia, Puerto Rico, and the Island Areas
- May have a formal government with elected officials

Census County Divisions (CCDs)

- Statistical entity
- Subcounty units that have stable boundaries and recognizable names in 21 states
- No minimum or maximum population guidelines







Places

Incorporated Places

- Legally bounded entity
- Referred to as cities, boroughs, towns, or villages, depending on the state
- Some form of local governance (city council, mayor, etc) recognized by the state

Census Designated Places (CDPs)

- Statistical entity
- Area with a concentration of population, housing, and commercial structures identifiable by name; not within an incorporated place



